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F.G.S. (Extr. Quar. Jour. Geol. Soc., Aug., 1879.) 8vo, pp. 421-424. From the author.

Report on the Mammals and Birds of the general region of the Big Horn river and mountains of Montana Territory. By Chas. E. McChesney, A. A. Surgeon U.S.A. (Ext. from Appendix SS [Report of Lieut. Maguire, Corps of Engineers] of the Annual Report of the Chief of Engineers, 1879.) 8vo, pp. 2371-2395. From the author.

United States Entomological Commission. Bulletin No. 5.—The Chinch Bug, its history, characters and habits and the means of destroying it or counteracting its injuries. By Cyrus Thomas, Ph.D. 8vo, pp. 44, and map. Washington, Government Printing office, 1879. From the Commission.

Quarterly Report of the Kansas State Board of Agriculture for the quarter ending December 31, 1879. By the Secretary. 8vo, pp. 165. From the Board.

The Archives of Comparative Medicine and Surgery. A Quarterly Journal of the Anatomy, Pathology and Therapeutics of the Lower Animals. Edited by Edward C. Spitzka, M.D. Vol. 1, No. 1, pp. 56, New York, Jan., 1880. From the editor.

Sea Air and Sea Bathing. By John H. Packard, M.D. 12mo, pp. 120. Philadelphia, Presley Blackiston, 1880. From the publishers.

Notes on the Bartram Oak, *Quercus heterophylla* Michx. By Isaac C. Martindale. 8vo, pp. 24. Camden, 1880. From the author.

Studies from the Biological Laboratory of Johns Hopkins University, Baltimore. No. 1v. The development of the Oyster. By W. K. Brooks. 8vo, pp. 81, pls. 10. Acquisition and loss of a food-yolk in Molluscan eggs. By W. K. Brooks. 8vo, pp. 107-116, pl. 1. Baltimore, 1880. From the University.

Geology of Wisconsin. Survey of 1873-1879.. Vol. III. Accompanied by an atlas of maps. T. Chamberlin, Chief Geologist. 8vo, pp. 763, pls. 53. Madison, Wis., 1880. From the State geologist.

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GENERAL NOTES.

BOTANY.

TRANSFORMATION OF ANTHERS INTO OVARIES.—In Gray's Manual, under *Salix livida*, we read, "A transformation of the *anthers into imperfect ovaries* is frequently observable in this species," and in the second edition, was added, "and occasionally in some others." Lately I found a *Salix discolor*, which no doubt is a female, and has on many branches monœcious catkins, the *ovaries fully developed*, some with a few staminate flowers between the pistillate, others with only a few pistillate flowers between many staminate ones, quite irregularly distributed, sometimes all the upper ones and a few in the middle and at the bare pistillate. This would agree (partly) with what Wichura said, in 1847, in a paper on the morphology of the pistil of *Salix*. He remarks: "The monstrous transformation of the *pistil into stamina* shows that the pistil consists of two laterally situated leaves. The style has two stigmata of which each splits mostly in two. The position of the stigmata is different, they correspond either with the middle line of the carpophyll, and thus are lateral, or correspond with the sutures as in *Cruciferae*, and are posterior and anterior." It may be that the transformation takes place in both ways, but in the present case I am sure that the plant is originally pistillate.

With what Wichura said about the position of the stigmata, I cannot agree. First, the carpophylls are not lateral, but anterior and posterior, corresponding the one with the gland, the other with the scale; this I think is generally known, though I find it nowhere mentioned, and then I found in all our species the stigmata, corresponding with the carpophylls, and even in those European species (*S. caprea*, *aurita*, *cinerea*, *viminialis*), in which, according to Wichura, the stigmata correspond with the suture. The ovary of the Cruciferae has a septum and the stigmata correspond with the placentæ, which run along the sutures. The ovary of *Salix* has no septum, the stigmata correspond with the placentæ, which are in the middle of the base of the carpophylls—*Fred. Brendel*.

ADDITIONS TO A HISTORICAL SKETCH OF BOTANY.—I send you some additional notes to my historical sketch, which appeared in the December and January numbers of the NATURALIST, with some corrections suggested by Dr. Engelmann. Dr. G. Engelmann, was born in February, 1809, and went to Missouri in 1832, residing in St. Louis since 1835. He knew Jos. Frank, in Heidelberg, 1827, where he was known under the nickname "plant hyena!" In 1835, Engelmann collected in Arkansas, and he thinks that Beyrich went there with Gen. Leavenworth. In Texas, Berlandier collected in the year 1834. Lindheimer came to West Texas in 1844. From Dr. Parry I learn that he published in Owen's Report, 1852, pages 606-622, a list of Iowa and Minnesota Plants collected in 1848.

Dr. Thos. Coulter's collections made in California in 1831-32, were published in the Journal of the Royal Geographical Society, Vol X. page 59: Notes on Upper California, communicated by Dr. Thomas Coulter, read March 9th, 1835, contains a map and itinerary. He met Douglas at Monterey, Nov., 1831, made a trip across the Colorado desert to the junction of the Gila and Colorado rivers, in spring of 1832. On his return to England, he was appointed Curator of the Herbarium, at Dublin, and died in 1840. This note I owe to Dr. Parry.—*Fred. Brendel*.

THE FLY-TRAP, ITS FIRST DISCOVERY.—The fly-trap (*Dionæa muscipula*) has lately been much spoken of; so it will be interesting to learn when this plant was first made known. John Ellis, (1711-1776), a London merchant, received in 1769, from Philadelphia, the plant and described it with drawings in "Directions for bringing over seeds and plants from the East Indies and other distant countries, in a state of vegetation, to which is added the figure and botanical description of *Dionæa muscipula*," London, 1770. The same gentleman published in 1771, "Copies of two letters to Dr. Linnæus and Mr. W. Aiton," containing descriptions and drawings of two other North American plants, *Illitium floridanum* and *Gordonia lasianthus*.—*Fred. Brendel*.

ARENARIA GRÆNLANDICA NEAR MIDDLETOWN, CONN.—I would also report *Arenaria grænlandica* Spring., as occurring in this vicinity. I have observed it in two places, both summits of rocks. It appears to grow in the very shallow bed of soil that collects on exposed rocky knobs, and is very abundant in these two narrow limits. The flowers are larger and the plants more luxuriant than in specimens from Greenland that I have seen, yet its identity is undoubted, and on the authority of Professors Gray and Eaton. The rocks on which it is found, occur on hills that rise two hundred feet or thereabouts, above the general level of the surrounding country.—*Henry L. Osborn, Wesleyan University.*

BOTANICAL NOTES.—In the *Botanical Gazette*, for April, Mr. I. C. Martindale discusses the germination and growth of the parasite, *Orabanche ramosa*, and M. E. Jones records his observations on remarkable forms of *Triticum repens*.—*Grevillea* for March notices New York fungi.—According to Prillieux, the roots of *Hartwegia ramosa* are negatively heliotropic, lengthening both by day and by night, due as he thinks, to the increased amount of growth on the illuminated sides. We also learn from the *Journal* of the Royal Microscopical Society for April, that a luminous fungus has been reported from the Andaman Islands; it is an agaric of small size, but exceeding in brilliancy anything which has hitherto been observed.—The influence of light on the movements of Desmids, has been investigated by E. Stahl, who finds that the cell of *Closterium* shows a tendency to place its longer axis in the direction of the rays of light, and that there is also a polarity between the two halves of the cell, in consequence of which, one is attracted towards, and the other driven away from the source of light. There is also a slow movement of the individual along the bottom in the direction of the source of light. When the light is very intense, the conditions are reversed, and the cell places itself with its longer axis at right-angles to the direction of the light. Observations by Göbel on *Micrasterias* and on the influence of light on the spores of low plants are noticed.—Ferdinand Lindheimer, the collector of "Plantæ Lindheimerianæ," lately died at New Braunfels, Mexico, aged about 78.—In a pamphlet printed at Camden, N. J., and entitled "Notes on the Bartram Oak, *Quercus heterophylla* Michx.," Mr. I. C. Martindale enters into an elaborate discussion of the reasons why the foregoing name given by Michaux should be maintained, and its rank as a good species established. The immediate occasion for the essay, was the discovery of some trees near Mount Holly.

ZOÖLOGY.¹

THE ISLAND OF REIL.—Dr. Spitzka has advanced reasons for denying the current theory that the Island of Reil is the locality

¹ The departments of Ornithology and Mammalogy are conducted by Dr. ELLIOTT COUES, U. S. A.